

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 7,502,630 B2  
APPLICATION NO. : 09/873449  
DATED : March 10, 2009  
INVENTOR(S) : Fan

Page 1 of 3

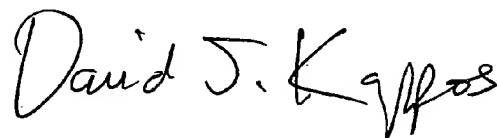
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The title page showing the illustrative figure should be deleted to be replaced with the attached title page.

The drawing sheet, consisting of Fig. 3, should be deleted to be replaced with the drawing sheet, consisting of Fig. 3, as shown on the attached pages.

Signed and Sealed this

Eleventh Day of May, 2010

A handwritten signature in black ink, reading "David J. Kappos". The signature is written in a cursive, flowing style with a large, stylized "D" and "K".

David J. Kappos  
*Director of the United States Patent and Trademark Office*

(12) **United States Patent**  
**Fan**

(10) **Patent No.:** **US 7,502,630 B2**  
(45) **Date of Patent:** **Mar. 10, 2009**

(54) **METHOD AND SYSTEM FOR TRANSMITTING DATA BETWEEN A BASE TRANSCEIVER STATION AND A SUBSCRIBER UNIT**

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(75) **Inventor:** **John Fan, San Jose, CA (US)**

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(73) **Assignee:** **Intel Corporation, Santa Clara, CA (US)**

**OTHER PUBLICATIONS**

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 274 days.

Andrews, Michael R. et al., Tripling the Capacity of Wireless Communications Using Electromagnetic Polarization, Nature Magazine, Jan. 18, 2001, pp. 316-318, vol. 409.

(Continued)

(21) **Appl. No.:** **09/873,449**

*Primary Examiner*—Meless N Zewdu

(22) **Filed:** **Jun. 5, 2001**

(74) *Attorney, Agent, or Firm*—Kacvinsky LLC

(65) **Prior Publication Data**  
US 2002/0183065 A1 Dec. 5, 2002

(57) **ABSTRACT**

(51) **Int. Cl.**  
*H04B 7/00* (2006.01)  
*H04B 1/38* (2006.01)  
*H04Q 7/20* (2006.01)  
*H04M 1/00* (2006.01)

The invention includes a method and system for wirelessly transmitting data between a base transceiver station and a subscriber unit. The method comprises generating control signals to configure a base transceiver station to transmit selected data streams to a corresponding subscriber unit on an assigned channel of a multiple access protocol. transmitting in response to the control signals and in a spatially separate fashion, the selected data streams on the assigned channel of the multiple access protocol and utilizing co-located electric dipole and magnetic dipole antennae at the subscriber unit to receive the selected data streams. The system comprises means for generating control signals to configure a base transceiver station to transmit selected data streams to a corresponding subscriber unit on an assigned channel of a multiple access protocol, means for transmitting in response to the control signals and in a spatially separate fashion, selected data streams on the assigned channel of the multiple access protocol and means for utilizing co-located electric dipole and magnetic dipole antennae at the subscriber unit to receive the selected data streams.

(52) **U.S. Cl.** ..... 455/562.1; 455/69; 455/452.1; 455/509; 455/550.1; 455/556.2; 455/561

(58) **Field of Classification Search** ... 455/452.1 452.2, 455/450-451, 448, 424, 425, 434, 463-464, 455/19, 24, 500, 550.1, 78, 553.1, 575.6, 455/575.7, 95, 97, 129, 150.1, 151.1-2, 166.2, 455/59-62, 63.4, 65, 69, 82, 88, 101-103, 455/504-507, 509, 516-517, 556.2, 561; 375/347, 267, 299; 343/725-726, 702, 797, 343/853, 742, 729, 751, 765, 774-778, 792, 343/794, 801, 804, 824, 873, 893

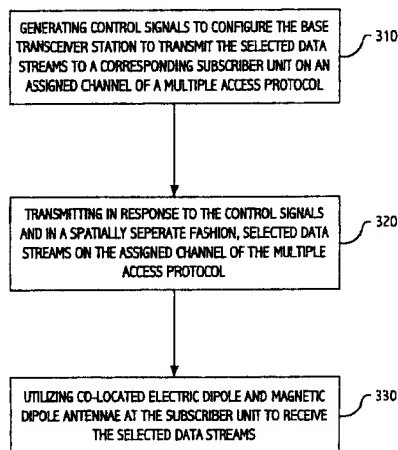
See application file for complete search history.

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**28 Claims, 8 Drawing Sheets**



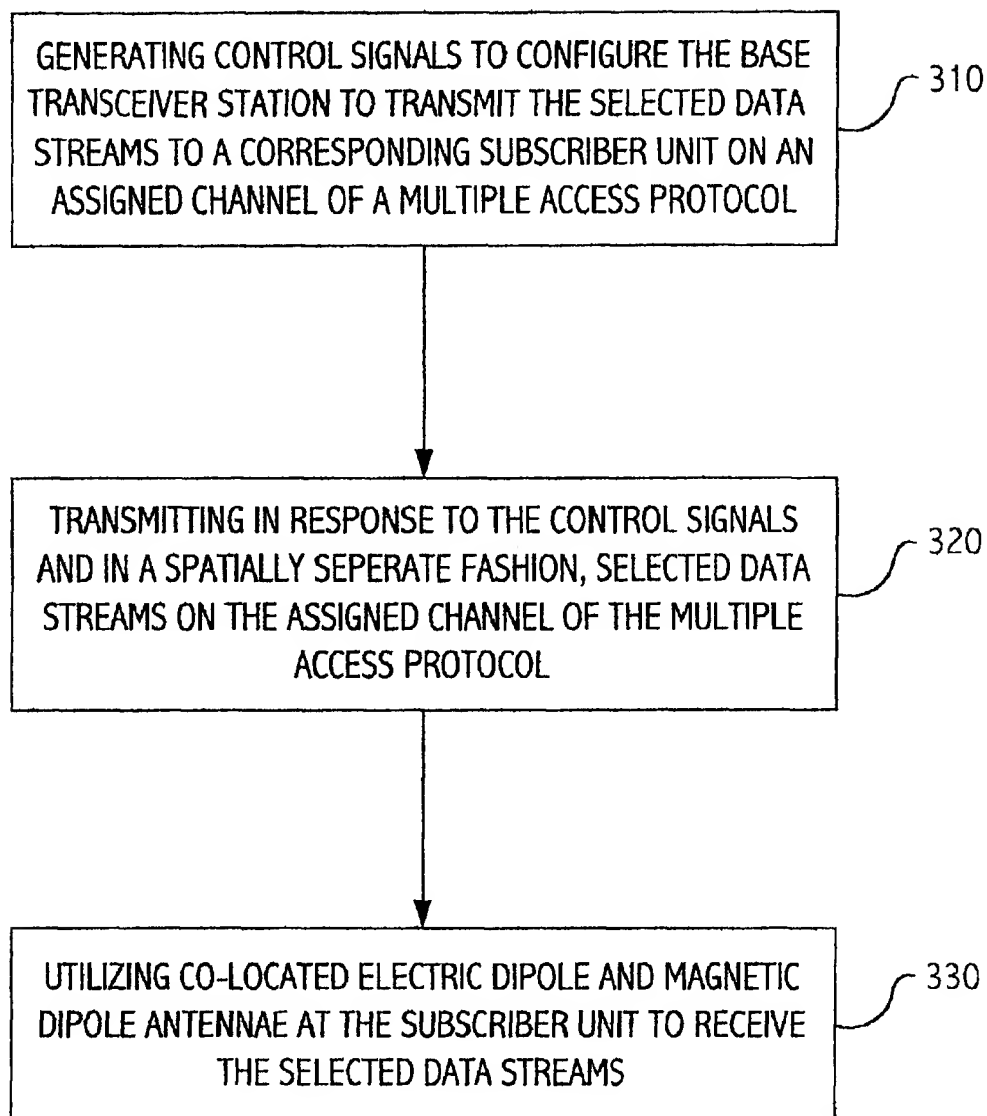


FIGURE 3